

MORKOVKINA, V. F.

PA 60T30

USSR/Geology
Copper

Dec 1947

"Genesis of Crystalline Slates of the Buronskiy Deposits, Central Caucasus," V. F. Morkovkina, 3 pp

"Dokl Akad Nauk SSSR, Nova Ser" Vol LVIII, No 7

Data permitting a new approach to solution of problem of genesis and development of Buronskiy copper pyrite deposits collected by 1938-1940 Caucasus Expedition of Academy of Sciences of USSR. Submitted by Academician D. S. Belyankin, 16 Jul 1947.

60T30

1708 KOV KIN4, J.F.

LA

8

Granitoids of Central C. Caucas (Osetiya) A. B. Mochalov
Zhurnal. Zemel. i vod. Nauk. 1967, Nauk. SSSR No. 107, Petrog. No. 24, 11-19 (1967). The petrography
and mineralogy of the granitoids and the geol. processes in-
volved in their formation are discussed. M. Huseh

MORKOVKINA, V.F.

MORKOVKINA, V.F.

SSR

Variability of the color of hornblende in the gabbro complex of the Ural. V. F. Morkovkina. *Dokl. Akad. Nauk SSSR*, 1963, 163, 421-423. In the gabbro-peridotite massifs of the Karaman zone of the Ural a white hornblende, although apparently insignificant variability of the color intensity of the given common hornblende is observed. The chem. analyses of two characteristic samples are given: SiO_2 48.15, 48.10; TiO_2 0.82, 1.70; Al_2O_3 14.06, 13.46; FeO 3.85, 3.40; FeO 10.91, 7.89; MgO 0.33, 0.23; MgO 11.01, 14.02; CaO 10.76, 11.88; Na_2O 2.62, 1.82; K_2O 0.40, 0.44; H_2O 0.72, 0.12; $\text{H}_2\text{O} + 1.76$, 1.69; Cl none, 0.03; S 0.06, 0.03; P none, 0.03; SiO_2 100.57, 100.15%; dark green, strongly pleochroic, bright green, weakly pleochroic. Both amphiboles are, in spite of their different chem. compn., rather uniformly observed in ultrabasic peridotites, dunites, gabbros, anorthosites, hybrids, plagiogranites, quartz-diorites. Also the optical constants of both hornblendes are given with their characteristic differences. There is also no indication that the two hornblendes are of different age, or that one of them is replaced by the other. Their genesis is not easily understood by one magmatic process; evidently, metasomatic reactions have contributed to the crystn. of the two amphiboles side by side. Interesting is the absence of any zoning structure in the plagioclases of the same rocks of the gabbro-peridotite massifs; their compn. varies in wide ranges: in gabbro from $\text{Ab}_{40}\text{An}_{60}$ to $\text{Ab}_{10}\text{An}_{90}$, in the anorthosites from $\text{Ab}_{40}\text{An}_{60}$ to $\text{Ab}_{10}\text{An}_{90}$, in quartz-diorites from $\text{Ab}_{40}\text{An}_{60}$ to $\text{Ab}_{10}\text{An}_{90}$. The rocks give the impression of assimilation products and hybrids by metasomatism ("basic migmatites").

W. Eitel

MORKOVKINA, V. F.

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Mineralogical and Geological Chemistry

2
②/ks
Problem of the origin of gabbro-amphibolites of several regions of the northern Urals. V. F. Morkovkina and N. P. Lupanova. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1953, No. 4, 45-66. —M. and L. conclude that gabbro-amphibolite and gabbro-peridotitic formation of the eastern slope of the North Urals, and especially their taxitic and lamellar varieties, do not appear to be differentiates of gabbro-magmas. Instead they are formed as a result of injection-metasomatic changes of rocks of different compns. and should be designated as mixed amphibolite complexes. Some chem. analyses of the rocks are provided.

Gladys S. Macy

MORKOVKINA, V. F., SYRIN, N. A., and UDOVKINA, N. A.

"Eclogites of the Urals."

A paper presented on 2 April. The Activity of the Moscow Society of
Naturalists, Byulleten' Moskovskogo Obshchestva Issledovaniy Prirody
Vol LX.

No. 1, Moscow, Nov-Dec 1951. 11/10-50, Geology Section.
Source: U-9235. 29 Nov 1955

MORKUNAS, A. V.

MORKUNAS, A. V.: "Oil-bearing cruciferous crops under the conditions of the Lithuanian SSR." Acad Sci Lithuanian SSR. Inst of Biology Kaunas, 1956. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN BIOLOGICAL SCIENCE)

So.: Knizhnaya letopis' No 15, 1956, Moscow

1. Concentrated Plants. The Effect of Micronutrients.
Cucurbitaceae.
2. Author: Ugulya, I. S., 1957, No. 5, 42-44.
3. Co-authors: Shays, S.; Vlasovicius, V.; Marzukas, V.
4. Inst.: Lithuanian Inst. of Agriculture
5. Title: The Effect of Micronutrients on the Potato
Harvest.

6. Orig. Pub.: Sov. zemes ukis, 1957, No. 5, 42-44.

7. Abstract: At the experimental farm of the Lithuanian
Institute of Agriculture a study was made
in 1956 of the effect of copper and manganese
fertilizers on the potato yield, the optimum
doses of these and the application method of
the fertilizers (regular and foliar dressing),
putting industrial wastes to use. The optimum
dose applied per ha was 6 kg/ha of CuSO₄ and
10 kg/ha of MnSO₄, boosting the yield by
10.5 centners and 27 centners per hectare.

8. Page: 1/2

MORKUS, J.; FRYDA, M.

Shall we use high-frequency heating in practice? p. 99.

TECHNIKA VYKUPU, MLYNARSTVI A PEKARSTVI. (Ministerstvo potravinarskeho
prumyslu a vykupu zemedelskych vyrotku a Sdruzeni mlynu a pekaren)
Praha, Czechoslovakia, Vol. 5, no. 2, Feb. 1960.

Monthly List of East European Accessions (EEAI), LC Vol. 9, no. 2,
Feb. 1960.

Uncl.

MOKRUSHIN, S. G.

PA 13/49T12

Jul/Aug 48

USSR/Chemistry - Films
Chemistry - Hydrolysis

"Experimental Research of Laminar Systems: XVIII, Formation of Fine Films on the Surface of a Nickel Tetra Ammine Solution," S. G. Mokrushin, Lab of Colloidal Chem, Ural Ind Inst and Ural State U, Sverdlovsk

"Kolloid Zhur" Vol X, No 4

Shows that during process of hydrolysis on the surface of solutions of nickel tetra ammine films with varying colors are formed. Formation of films is regarded as process of surface coagulation with subsequent addition of layers of

13/49T12

Jul/Aug 48

USSR/Chemistry - Films (Contd)

colloidal particles on the lower surface of the original film. Colloidal particles of nickel hydroxide have laminated forms. Time of formation depends on the concentration, temperature, and air current acting on the surface of the film. Thickness of the film is determined by the ability of color components to penetrate it.

13/49T12

11/2/1961
MORKUSHIN, S.G.

Foam chromatography of colloids. Scob.o nauch.rab.chl.VKHO no.2:26-27
(MIRA 10:10)

(Chromatographic analysis) (Colloids)

SKRYLEV, I.D.; BORISIKHINA, V.I.; MORKUSHIN, S.G.; Prinimala uchastiye:
DAVYDOVA, T.A., studentka

Extraction of mixed heavy metal ferrocyanides in colloidal solutions
from their hydrosols by emulsification. Part 1: Effect of gelatin
additions and of the amount of organic liquid used for emulsification.
Izv.vys.uchet.zav.;khim.i khim.tekh. 4 no.4:611-613 '61.
(MIRA 10:1)

1. Ural'skiy politekhnicheskii institut imeni Kirova, kafedra
fizicheskoy i kolloidnoy khimii.
(Ferrocyanides)

MORKVA, V.D., gornyy inzh.; BUDNIKOV, N.I., a gornyy inzh.; KUCHENKO, A.Ya.,
gornyy inzh.

Making appraisals in the Koryovy P. & P. factory for the construction
of holes. Gor. zhur. no.5:71-72 My 1965. (MIRA 13:5)

1. Nauchno-issledovatel'skiy gornyy inzh. zavod, Koryovy P. & P.

SAMORODOLNE, A.I., born, M. NEVA. 7.10.1921. 1. 1941. 1941.

Making no mention of a ...
no. 5420. ...

1. Spahkova about ...
cannot think ...
(see ...)

MARTIN, J.

Removal of the...
11. 2. 1971. 11. 2. 1971. 11. 2. 1971. 11. 2. 1971.
7. 1. 3, n. 1, Apr.

11. 2. 1971. 11. 2. 1971. 11. 2. 1971. 11. 2. 1971.
7. 1. 4, n. 1, Dec. 1971. 5

MURLEVA, I.

RUMANIA/Cultivated Plants - Technical, Oleaginous, Sacchariferous. 1-7

Abstr Jour : Bot Jour - Biol., No 3, 1958, 39-39

Author : Murleva, I.

Inst : Rumanian Scientific Institute of Agronomy.

Title : Contribution to the Study of the Fruit Formation of *Arachis hypogaea* L.

Orig Pub : Anuarullucrar. stant. Inst. agron., 1957, 127-140.

Abstract : 4 consecutive stages of fruitbearing were studied: formation of the embryonic packet, fertilization, appearance of the gynophore and differentiation of the ripening. It was found that the gynophore originates from the ovule located at the base of the ovary. The presence of transitory starch was discovered in mesocarp, and of the individual secretory cells - in the fruit and in the seed. Changes in fruit tissues and fruits took place during

Card 1/2

MORLIN, Z.; SARINGER, M.

Investigation of the extinction of the fluorescence of 3,4-benzopyrene. Acta phys Hung 14 no.2 3:211-216 '62.

1. Research Laboratory for Chemical Structures of the Hungarian Academy of Sciences, Budapest (for Morlin). 2. State Institute of Hygiene, Budapest (for Saringer). Presented by G. Szigeti [Gyorgy Szigeti]

MORLIN, Z.; TREMMEL, J.

The effect of electron irradiation on some alkali halide single crystals. Chekhosl fiz zhurnal 13 no.3:216-218 '63.

1. Chemical Structures Research Laboratory, Hungarian Academy of Sciences, Budapest.

MORLIN, Z

HUNG.

10070* Contribution to the Investigation of Recrystallization Processes. Beitrag zur Untersuchung der Rekristallisationsvorgänge. (German.) Z. Morlin. *Acta Physica Academiae Scientiarum Hungaricae*, v. 4, no. 8, 1955, p. 197-208.

Microscopic study of recrystallization mechanism and grain boundaries in NaCl. Micrographs. 7 ref. BB

MORLIN, Z.

HUNGARY/Optics - Luminescence

K-6

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 11778

Author : Morlin, Z.

Inst : Technical University for Construction Industry, Budapest,
Hungary

Title : Afterglow of Recrystallization NaCl Phosphors, Activated by
TlCl.

Orig Pub : Acta phys. Acad. sci. hung., 1957, 7, No 3, 341-356

Abstract : The author has obtained, from aqueous solutions, a powdered compound of NaCl with an admixture of TlCl in concentrations of 1.02×10^{-6} to 5.1×10^{-1} mole percent. The powders are pressed in tablets at a pressure of 100 to 1,000 kg/cm² at temperatures of 20 to 600°C. It is shown that the Tl penetrates into the lattice during the recrystallization processes. The afterglow of the specimens was investigated with the aid of a photomultiplier. The excitation was by means of the light of a Hg quartz lamp. It was established that the stored total light during excitation depends on the concen-

Card : 1/2

HUNGARY/Solid State Physics - Crystal Morphology

E-8

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 976

Author : Arkosi K., Morlin Z.

Inst : Institute of Measurement Techniques and Instrument Construction, Hungarian Academy, Technical University for the Building Industry, Budapest, Hungary

Title : Electron Microscopic Investigation of Crystals of NaCl.

Orig Pub : Acta phys. Acad. sci. hung., 1957, 8, No 1-2, 129-146

Abstract : An investigation is made of the surfaces of synthetic and natural crystals of NaCl. The latter ones (from Wieliczki, Poland) have relatively few defects, which evidences a slow rate of growth. Synthetic crystals, obtained in the crystallization from a rapidly-cooling melt, consist of individual blocks with a large number of defects. The surface structures of natural crystals, after they have been deformed by bending, are very similar to the structures of their synthetic analogues. The growth figures on the surface of the plates, obtained as a result of recrystallization of NaCl

Card : 1/2

MORIK, József, dr.; MORLIN, Zoltan

Pollution of the air of industrial settlements by metals.
Hépegészségügy 40 no.11:288-293 II '59.

1. Közlemény az Országos Képegészségügyi Intézetől (főigazgató:
Bakács Tibor dr.).
(AIR POLLUTION)
(METALS)

MORLIN, Zoltan

Investigation of recrystallization processes with luminescence. I. Extinction of NaCl-Tl recrystallization phosphoruses. II. High temperature extinction and thermoluminescence of NaCl and KCl recrystallization phosphoruses activated by Tl. Magy fiz folyoir 8 no.4:293-319 '60. (EEAI 10:2)

1. Muszaki Fizikai Kutato Intezet, Budapest.
(Salt) (Thallium) (Potassium chloride)
(Phosphors) (Luminescence) (Crystals)

MORLIN, Zoltan

Crystal growth in solid phase. Fiz szemle 10 no.1:7-11 Ja '60.

1. Magyar Tudomanyos Akademia Muszaki Fizikai Intezete.

MALICSKO, Laszlo (Budapest); MORLIN, Zoltan (Budapest)

Coloring sodium chloride powders by exoelectrons. Magy fiz folyoir 9
no.3:181-184 '61.

1. Epitoipari es Kozlekedesi Muszaki Egyetem Kiserleti Fizika Tanszek.
(for Malicsko) 2. Magyar Tudomanyos Akademia Kemiai Szerkezetkutato
Laboratoriuma (for Morlin).

MALICKO, L.; MERLIN, Z.

Coloring sodium chloride powder through x-rays. Acta phys Hung
13 no.3:353-357 '61.

1. Institut für Experimentalphysik der Technischen Hochschule für
Bauindustrie und Verkehrswesen, Budapest. (for Malicko) 2. Forschungs-
laboratorium für Chemische Strukturen der Ungarischen Akademie der
Wissenschaften, Budapest. (for Merlin)

24.7700

G/030/62/002/003/001/001
1030/1230

AUTHOR: Malicskó, L. and Morlin, Z.
TITLE: Color centers in NaCl generated by pressure and temperature
PERIODICAL: Physica status solidi, v. 2, no. 3, 1962, 325-335

TEXT: Purpose of this work is an investigation of the unknown kinds of coloring obtained in powdered NaCl by the method of Z. Gyulai and Z. Morlin, Fizikai Szemle 2, 4 (1952); Z. Gyulai, Izv Akad Nauk SSSR 20, 1569 (1956) i.e. by subjecting the powder to pressure at elevated temperatures. Powdered NaCl steel-pressed to 3000 kg/cm² at temperatures from 35°C to 300°C is transparent or colored. Transparent samples were obtained from powders colored under pressure at temperatures of up to 700°C. Absorption spectra obtained from 100 samples are tabulated. Part of the absorption bands are correlated to color centers of single crystals colored by the usual methods. New bands are due to levels produced by distortions associated with dislocations. A scheme of energy levels is suggested. Color centers generated by this method are due to thermal electrons emitted by the metal in contact with the powder and by metal impurities. There are 14 figures and 1 table.

ASSOCIATION: Institut für Experimentelle Physik der Technischen Universität für die Bauindustrie (Institute for Experimental Physics of the Technical University for the Building Industry Budapest)

SUBMITTED: December 29, 1961

Card 1/1

MALICKO, Laszlo; MORLIN, Zoltan

Color centers produced by pressure and heat in NaCl. Magy fiz
folyoir 10 no.3:157-167 '62.

1. Építőipari és Kozlekedési Műszaki Egyetem Kísérleti Fizikai
Intézete, Budapest (for Malicko). 2. Magyar Tudományos Akadémia
Kémiai Szerkezeti Kutató Laboratorium, Budapest (for Morlin).

MORLIN, Zoltan

Microhardness tests on NaCl monocrystals. *Magy fiz folyoir*
10 no.3:169-181 '62.

1. Magyar Tudományos Akademia Kemiai Szerkezeti Kutato Labora-
torium, Budapest.

MORLIN, Zoltan

Some physical aspects of microhardness measurements. Magyar fizikai folyoir 10 no.3:223-230 '62.

1. Magyar Tudomanyos Akademia Kemiai-Szerkezeti Kutato Laboratorium.

MORLIN, Zoltan, a fizikai tudományok kandidátusa; TREMMEL, Janos

An account of the Dresden conference on electron microscope. Kem
tud kozl MTA 18 no.4:619-623 '62.

1. Magyar Tudományos Akademia Kemia-Szerkeszeti Kutato Laboratoriuma,
Budapest.

L 44759-66 I/EWP(t)/ETI IJP(c) JD/GG
ACC NR: AP6032890

SOURCE CODE: HU/0016/65/000/006/0164/0167

AUTHOR: Morlin, Zoltan

ORG: Research Laboratory for Chemical Structure, MTA (MTA Kémiai Szerkezeti Kutató Laboratorium)

TITLE: Phase transformation in crystals

SOURCE: Fizikai szemle, no. 6, 1965, 154-167

TOPIC TAGS: crystallography, crystal structure

ABSTRACT: Phase transformations in crystals, defined as transformations from one crystal structure type into another within the solid state, were investigated theoretically on the basis of thermodynamic considerations, crystallographic considerations and by examining the transformation mechanisms involved. The thermodynamic considerations were illustrated on the basis of CsCl as an example. Insofar as crystallographic considerations are concerned, transformation may involve secondary coordination, primary coordination, chemical bond, and other factors. The mechanisms were discussed on the basis of published data. Orig. art. has: 6 figures and 7 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: none / OTH REF: 007

Card 1/1 ULR

MORLOVA, Irina; URSU, Teodora; DOBRE, Florica (Bucuresti)

Histological data on the cancer of grapevine (*Vitis vinifera* L.)
Natura Biologie 16 no.5:74-78 S-0 '64.

KOCHARYAN, N.M.; MATSOYAN, S.G.; BARSAMYAN, S.T.; PIKALOVA, V.N.; TOLAP-
CHYAN, L.S.; MOULYAN, N.M.

Dielectric loss, dielectric constant, and the effective dipole
moment of polydimethylvinylethynylcarbinol. Dokl. AN Arm. SSR 37
no.1:7-13 '63. (MIRA 16:11)

1. Tsentral'naya nauchno-issledovatel'skaya fiziko-tehnicheskaya
laboratoriya AN Armyanskoy SSR. 2. Chlen-korrespondent AN Armyans-
koy SSR (for Kocharyan).

MATSOYAN, S.G.; AVETYAN, M.G.; AKOPYAN, L.M.; VOSKANYAN, M.G.; MORLYAN, N.M.;
ELIAZYAN, M.A.

Cyclic polymerization and copolymerization. Part 4: Synthesis
and study of the cyclic polymerization of some divinylacetals and
diisopropenylacetals. Vysokom.soed. 3 no.7:1010-1014 J1 '61.
(MIRA 14:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.
(Acetals' (Polymerization)

MATSOYAN, S.G.; MORLYAN, N.M.; SAAKYAN, Al'b.A.

Polymerization mechanism of vinyl ethynyl carbinols.

Izv. AN Arm. SSR. Khim. nauki 15 no. 4: 405-406 '62.

(MIRA 15:11)

1. Institut organicheskoy khimii AN Armyanskoy SSR.
(Methanol)
(Polymerization)

DATE: 1961, 10.0; M. J. Z. M.

polymerization of
radical polymerization
in solutions. The polymerization of
the monomer in the presence of a
catalyst.

polymerization of
radical polymerization
in solutions. The polymerization of
the monomer in the presence of a
catalyst.

1. Institut für Polymerforschung, Leipzig

MATSOYAN, S.G.; MORLYAN, N.M.

Cyclic polymerization and copolymerization. Report No.25:
Structure of dimethylvinylethynylcarbinol polymers and the
mechanism of their formation. Izv.AN Arm.SSR. Khim.nauki 16
no.4:347-356 '63. (MIRA 16:9)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

MA. NIAN, G. H. M. NIAN, N. H.

polymerization of vinyl ethynyl
6.00 5.00 4.00 3.00 2.00 1.00 0.00
0.00 0.00 0.00 0.00 0.00 0.00 0.00

MATSOYAN, S.G.; MORLYAN, N.M.

Cyclic polymerization and copolymerization. Part 29:
Radical polymerization of aliphatic vinyl ethynylcarbinols.
Izv. AN Arm. SSR. Khim. nauki 17 no. 3:319-328 '64.

Cyclic polymerization and copolymerization. Part 30: Radical
polymerization of ethers and esters of vinyl ethynylcarbinols.
Ibid.:329-338
(MIRA 17:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

MATSOYAN, S.G.; MORLYAN, N.M.; KINOYAN, F.S.

Kinetics of tertiary amylethynylcarbinol polymerization. Vysokom.
sced. 7 no.7:1159-1164 51 '65. (MIRA 18:8)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

MATSOYAN, S.G.; MORIZYAN, H.M.; SAAKYAN, A.A.

Cyclic polymerization and copolymerization. Part 1. Radical
polymerization of some ringlactone compounds. Izv. AN Arm.
SSR. Khim.nauki 12 no.1:62-75 '66.

(MIRA 18:5)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

BORISOVICH, Yu.F.; VARDOSANIDZE, D.G.; TIKHONOV, P.; LOVENETSKAYA, YE.K.;
MORJULEV, M.T.

Throughout the Soviet Union. Veterinariia 36 no.7:92-94
J1 '59. (MIRA 12:10)
(Veterinary medicine)

CELESTINA AVANTIA

LEMA, A.; RUSAR, J.; KASPER, St.; Chair of Pharmacology, Medical Faculty, P.J. Safarik University (Katedra Farmakologie LF), 78201, Brno.

"The Influence of a Protein-Free Diet on the Analgesic Effect of Morphine Influenced by Serotonin, Amphetamine, and Reserpine."

Průmysl, Československá Fysiologie, Vol 15, No 5, Sep 66, pp 415 - 419

Abstract: Two groups of rats were used in the experiments. Rats fed a normal Lardon diet showed no effect of reserpine on the analgesic effect of morphine; serotonin enhanced the effect of morphine. An extended administration of protein-free diet did not induce noticeable changes in the analgesic effect of morphine nor in the effects of its combinations with reserpine, amphetamine, and serotonin. 1 Western, 4 Czech, 1 Russian, 1 Hungarian reference. Submitted at 10 Days of Pharmacology at Smolnice, 17 Feb 66.

1/1

- 58 -

MORNENKO, P.D.

3

1. D. S. R. 13
Baranovskiy, T. V., and Mornenko, P. D.: Protivostoyaniye
Kuznetsovskogo kluba (Production of Gusein Ghalib). Moscow:
Psichopromizdat. 1953. 18 pp.

CH

(1)

ME

MORNSTEINOVA, D.; SZANTO, J.

Experience with isolation of viruses of epidemic hepatitis.
Bratisl. lek. listy 35 no.6:321-330 1955.

1. Z Virologického ustavu CSAV v Bratislave, riaditel
akademik D. Blaskovic.

(HEPATITIS, INFECTIOUS, virus,
isolation.)

(VIRUSES,
hepatitis, infect., isolation.)

MORNSTEINOVA, D.; ALBRECHT, P.

Experimental infection of the mouse *Micromys minutus* with the virus
of Czechoslovakian tick-borne encephalitis. *Cesk. epidem. mikrob.*
imun. 6 no.3:157-161 May 57.

(ENCEPHALITIS, EPIDEMIC, exper.
in mice (Cz))

CZECHOSLOVAKIA / Virology--Viruses of Man and Animals; E
Viruses of Transmission Infections

Abs Jour: Ref Zhur-Biologiya, No 21, 1958, 94886

Author : Mornsteinova, Doubravka

Inst : Not given

Title : Preservation of Transmission Viruses in Water

Orig Pub: Biologia, 1957, 12, No 11, 871-873

Abstract: No abstract.

Card 1/1

CZECHOSLOVAKIA / Virology--Viruses of Man Animals; Viruses E
of Transmission Infections

Abs Jour: Ref Zhur-Biologiya, No 21, 1958, 94850

Author : Mornsteinova, Deubrayka

Inst : Not given

Title : Disinfecting Effect of Chlorine Preparations on
Encephalitis Virus

Orig Pub: Biologia, 1957, 12, No 12, 898-908

Abstract: Active chlorine and chloramine in concentrations up
to one milligram per milliliter inactivate viruses
of tick encephalitis and western horse encephalitis;
The chlorine is more effective.

Card 1/1

MORKOVKINA, V. F.

"Gabbroperidotite Formations of the Polar Region of the Urals."

A paper presented on 19 May. The Activity of the Moscow Society of Naturalists, Bulletin Moskovskogo Obshchestva Isledovaniya Prirody Vol LX.

No 6, Moscow, Nov-Dec 1958, pp. 9-50, Geolog. Section.
Source: U-9235, 29 Nov 1958

MORKOVKINA, V.F.

Phenomena of hybridism and assimilation in rocks of the gabbro-peridotitic formation in the Polar Urals. Trudy Inst.geol.nauk no.159:69-95 '55. (MLRA 9:5)
(Ural Mountains--Rocks, Igneous)

MORKOVKINA, V.F.

Granodiorite intrusion of gabbro-peridotite formations and rare-metal mineralization connected with it (Polar Urals). Trudy IGEM no.21:70-111
' 58. (MIRA 12:1)
(Ural Mountains--Rocks, Igneous) (Molybdenum)

MOROKOVKINA, V.F.

Jadeitites in the ultrabasites of the Polar Urals. Izv. AN SSSR.
Ser. geol. 25 no.4:103-108 Ap '60. (MIRA 13:11)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii
i geokhimii AN SSSR, Moskva.
(Ural Mountains--Jadeitite)

MORKOVKINA, V.F.

Metasomatic transformations of ultrabasites in the Arctic Urals.
Trudy IGEM no.77:130-224 '62. (MIRA 16:2)
(Ural Mountain region--Ultrabasite)
(Ural Mountain region--Metasomatism)

MORKOVKINA, V.F.; AFANAS'YEV, G.D., otv. red ; FIN'KO, V.I., red.
izd-va; POLYAKOVA, T.V., tekhn. red.; PRUSAKOVA, T.A.,
tekhn. red.

[Chemical analyses of igneous rocks and rock-forming minerals]
Khimicheskie analizy izverzhennykh gornyykh porod i porodo-
obrazuyushchikh mineralov. Sost. V.F.Morkovkina. Moskva, Izd-
vo "Nauka," 1964. 249 p. (MIRA 17:3)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdeniy,
petrografii, mineralologii i geokhimii. 2. Chlen-korrespondent
AN SSSR (for Afanas'yev).

SKORZHINSKIY, D.S., otv. red.; AFANASIYEV, G.D., red.; MAKEYEV,
B.V., red.; MORKOVKINA, V.F., red.

[Charnokites] Charnokity. Moskva, Izd-vo "Nauka," 1963.
86 p. (Its Doklady sovetskikh geologov. Problema 13)
(I LKA 17:6)

1. International Geological Congress, 22d. 1963.

MORKOVKINA, V. F.

Age of ultrabasites in the Northern Ural Mountains. Izv AN
SSSR Ser geol ~~29 no. 5:17-21~~ ~~1964~~. (MIRA 17:5)

1. Institut geologii rudnykh mestorozhdeniy petrografii,
mineralogii i geokhimii AN SSSR, Moskva.

MORKOVNIKOV, A.

For a further expansion of grain farming in Chelyabinsk Province.
Zemledelie 5 no.7:7-13 JL '57. (MLRA 12:8)

1. Glavnyy agronom Chelyabinskogo oblastnogo upravleniya sel'skogo
khozyaystva.

(Chelyabinsk Province--Grain)

DLABAC, Mikulas; MORKOVSKA, Vera

Lithologic and facies evaluation of the Pliocene in
several bore holes in the Danube Lowlands. Gas mineral
geol 8 no.1:4-12 Ja '63.

1. Ceskoslovenske naftove doly, n.p., Vyzkumny ustav,
Brno.

BRONSKIN, B.M., 1922. (Ryazan.)

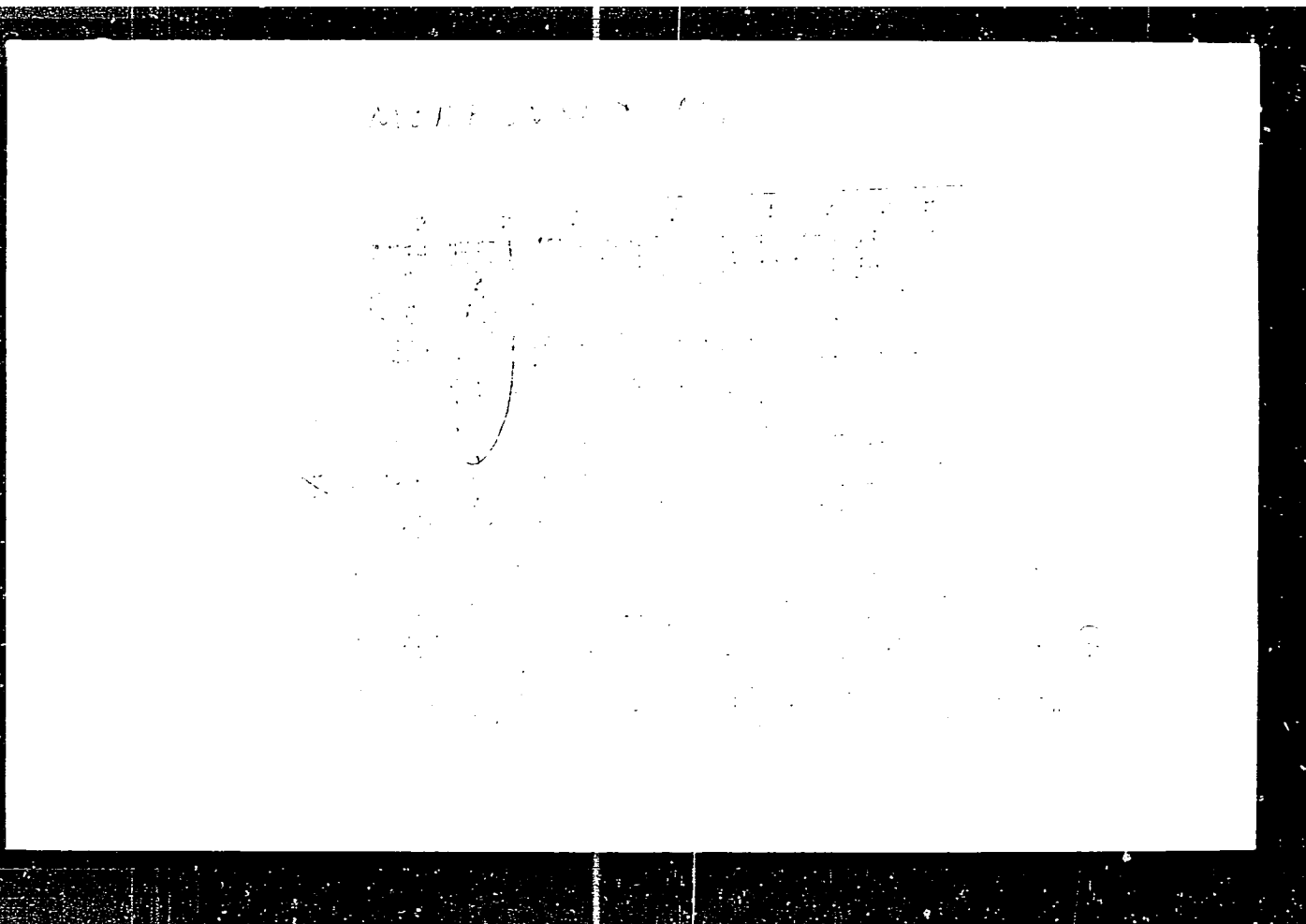
Dep. of Ing. as artesian well with 18 (artesian) pressure water
100. 1 ear. 100. no. 100. 100. 100. (100. 100.)

WORKOVSKY, I

"A report on escapes of nitrore in the small family basin in the geologic conditions established there."

n.125 (Vestnik, Vol. 33, no. 1, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (April 1958, Vol. 1, no. 1, April 1958)



SECRET
MURKOVSKY, III.

CZECHOSLOVAKIA

DVORAK, J; MURKOVSKY, M.

Prague, Casopis pro mineralogii a geologii, No 3, 1963,
pp 282-283

"A Contemporary Report on the Palaeozoicum during the
Boring of Slavkov 2 in the Carpathian Hinterland."

DVORAK, Jaroslav; MORKOVSKY, Milan

Preliminary report on the Paleozoic at the Slavkov 2 borehole in
the frontal Carpathian Plain. Cas min geol 8 no.3:282-283 JI '63.

POKORSKA, B.

Observations of minor planets and comets at the Poznan University Observatory.
p. 224.

ACTA ASTRONOMICA. (Polska Akademia Nauk. Komitet Astronomii)
Warszawa. Vol. 8, no. 4, 1958. In English
Polish/

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Uncl

MORKOWSKA, K

Fluorescence of solutions of bis-*p*-hydroxycinnamoyl-methane. Kazimiera Morkowska. *Acta Phys. Polon* 6, 235-43 (1957). — The absorption and fluorescence spectra of bis(*p*-hydroxycinnamoyl)methane in benzene soln. at 20° were studied. The fluorescence spectrum is composed of 2 broad bands partly superposed with intensity max. at 4780 and 4540 Å. The absorption spectrum shows 3 bands (intensity max. at 4320, 4120 and 3920 Å.) and a continuous absorption in wave lengths below 3300 Å. The position of max. in the fluorescence spectrum is not changed by change of the exciting light. In solvents of higher dielec. const. (xylene, Et₂O, CHCl₃, Et₂CO, EtOH and glycerol) the fluorescence bands are shifted toward longer waves. The spectrum is greatly changed at the h. p. of liquid air, but no regularity could be observed for the various solns. E. Jozefowicz

MORKOWSKA, KAZIMIERA

Electroluminescence of crystals. Kazimiera Mor-
kowska. Polscy Fiz. 5, 203-204, 1954. - Review of -
Electroluminescence of crystals and an attempt to reconcile
exptl. results with theoretical concepts. Sylwia Nowinska

SW

MORKOWSKA, T.

Electroluminescence of crystals, p. 293. (POSTĘPY FIZYKI, Warszawa, Vol. 5, no. 3, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

TRZEBSKA-JESKE, Irena; MORKOWSKA-GLUZINSKA, Wanda

Content of nitrogen and certain essential amino acids in
the grain of Polish rye from the 1959 harvest. Roczn panstw
zakl hig no.2:153-166 '63

1. Department of Feeding Hygiene, State Institute of Hygiene,
Warsaw.

POLAND/Magnetism - Ferromagnetism.

F-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 6252

Author : Morkowski Janusz

Inst : Institute of Physics, Polish Academy of Sciences, Warsaw

Title : Reversible Susceptibility under Stress

Orig Pub : Acta phys. polon., 1958, 17, No 6, 435-453

Abstract : A measurement was made of the reversible susceptibility of polycrystals of nickel, subjected to tension (up to 21 kg/mm^2) and compression (to 14 kg/mm^2) in magnetic fields up to 68 oersteds. During tension, the reversible susceptibility decreases in the region of weak fields and increases in stronger fields. Small compression stresses (up to 3 kg/mm^2) cause the opposite effect. The compression above 3 kg/mm^2 leads to a reduction in the reversible susceptibility at all values of the magnetic

Card 1/2

MOR KOWSKI, J.

2/10
Desaccommodation effect in nickel. Janusz Morkowski.
Acta Phys. Polon. 18, 75-9(1959)(in English).—The reversible magnetic permeability of Ni decreased with time (up to 20 min.) after the application of compressive stress or after demagnetization. The effect was strongly temp.-dependent. Possible mechanisms of this "desaccommodation" are discussed. H. Newcomb

P/045/60/019/01/001/008
B018/B000

AUTHOR: Morkowski, J.

TITLE: On the Approach to Equilibrium of the Spin Waves System. I

PERIODICAL: Acta Physica Polonica, 1960, Vol 19, Nr 1, pp 3 - 19 (Poland)

ABSTRACT: The author of this paper presents an investigation of spin-wave interactions which lead to a thermodynamic equilibrium of the spin system. Since publications concerning the same problem (Akhiezer, Kasuya, Kaganov, Tsukernik) contain shortcomings, the present calculations are based on Dyson's theory of spin-wave interactions (Ref 4), which is more exact than the Holstein-Primakoff theory. The discussion of the spin-wave relaxation in perfect cubic ferromagnetic crystals is started with setting up the Hamiltonian. The author uses the Heisenberg model of ferromagnetics neglecting s-d interactions, for this investigation is to examine only relaxation processes connected with direct interactions of spin waves. The spin-wave energy is calculated in first approximation as well as the transition probability from one ideal spin-wave state to the other. The final results are given in section 5 where the kinetic equation and relaxation time are calculated in first approximation from the transition probabilities for which purpose average numbers of

Card 1/2

On the Approach to Equilibrium of the Spin Waves System. I P/045/60/019/01/001/008
B018/B000

transitions must be obtained. This is brought about after a simplifying assumption has been made. Finally, the relaxation time is calculated for spin waves with zero wave vectors, and it is shown that the contribution to the line width of ferromagnetic resonance absorption from such spin waves is not important. There are 16 references 4 of which are Soviet.

ASSOCIATION: Department of Ferromagnetics, Institute of Physics of the Polish Academy of Science, Poznań (Department of Ferromagnetics, Institute of Physics of the Polish Academy of Science, Poznań)

SUBMITTED: May 11, 1959



Card 2/2

86669

P/045/60/019/006/008/012
B011/B059

24.7900 (1035, 1144, 1160)

AUTHOR: Morkowski, Janusz

TITLE: Spin-spin Relaxation Time in Ferromagnetics

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 6, pp. 701 - 710

TEXT: The present paper is a continuation of an earlier paper by the same author (Ref. 9). The author calculates the relaxation time for spin waves with a small wave vector in ferromagnetics, assuming the same approximations as in Ref. 9 (exchange and pseudo-dipolar interactions confined to the nearest neighbors, long spin waves as compared to the lattice constant). For spin waves excited in ferromagnetic resonance in metals and having a wave vector of the order of magnitude of the inverse skin depth, the relaxation time may be determined from the splitting of one spin wave into two (and confluence of two into one), leading to relaxation times of $\sim 10^{-8}$ sec for nickel (at room temperature and with a magnetic field strength of about 5200 oersteds. This result is only a rough estimate of the order of magnitude, as this spin-spin relaxation time depends on $(J/D)^2$ and the

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86669

Spin-spin Relaxation Time in Ferromagnetics P/045/60/019/006/008/012
B011/B059

pseudo-dipolar coupling constant D is a quantity not known exactly
(J - coupling constant of exchange interaction). Professor S. Szczeniowski
is thanked for his helpful advice. There are 11 references: 1 Soviet,
9 US, and 1 Polish.

ASSOCIATION: Department of Ferromagnetics, Institute of Physics of the
Polish Academy of Sciences, Poznań

SUBMITTED: April 25, 1960

Card 2/2

MORKOWSKI, Janusz

Spin-spin relaxation time in a model of non-uniform ferromagnetic.
Acta physica pol 20 no.9:783-785 '61.

1. Department of Ferromagnetics, Institute of Physics of the Polish
Academy of Sciences, Poznan.

24.2140

S/126/62/013/006/017/018
EO32/E514

AUTHOR: Morkowski, J.

TITLE: Remarks on the theory of superconductivity of
ferromagnetics

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.6, 1962,
940-942

TEXT: It is shown that the ground state of a superconducting
ferromagnetic with a sufficiently weak s-d-exchange interaction
is not the state in which region II in the momentum space is
occupied by "left singlets" $[(-k, -)$ electrons in the absence of
(k,+) electrons] as concluded by S. V. Vonsovskiy and
M. S. Svirskiy (ZhETF, 1960, 39, 384), but is a state devoid
of "left singlets". This is deduced by considering the average
energy of a system of conduction electrons and noting that the
state in which region II is filled with "left singlets" is
not a minimum-energy state.

ASSOCIATION: Institut fiziki Pol'skoy Akademii nauk
(Institute of Physics, Polish Academy of Sciences)
SUBMITTED: February 26, 1962
Card 1/1

L 17174-63

ACCESSION NR: AP3001745

EWI(1)/BDS

AFTC/ASD

F/0045/63/023/004/0469/0486

AUTHOR: Morkowski, Janusz

53
51

TITLE: Intrinsic contribution to the ferromagnetic resonance line-width at high temperatures

SOURCE: Acta physica polonica, v. 23, no. 4, 1963, 469-486

TOPIC TAGS: ferromagnetic resonance, line-width, ferromagnetic resonance line, damping, ferromagnetic resonance line-width

ABSTRACT: Remarkable progress has been achieved in the theory of ferromagnetic resonance line-width in recent years employing in essence the spin wave theory, which is applicable to low temperatures only. In this article, the damping of the ferromagnetic resonance line determined by mutual spin interactions is considered. The spin interactions Hamiltonian contains anisotropic part of a dipolar type. The calculations are performed with a truncated Hamiltonian, commuting with the z-component of total spin of the system and determining the main ferromagnetic resonance absorption line. The role of neglected terms, leading to the satellite resonance lines is estimated. The dynamical susceptibility

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ACCESSION NR: AP3001745

2

tensor is calculated using Green's functions theory. Particular attention is paid to the high temperature region near the Curie point. The general expression for the line-width is given in terms of two static correlation parameters. The general conclusion drawn is that the half-width as well as the frequency shift are finite and not singular at the Curie point.

"I should like to thank Professor Szczepan Szczeniowski for discussions and for reading the manuscript." Orig. art. has: 93 equations.

ASSOCIATION: Zaklad Ferromagnetykow PAN, Rzeszow (Ferromagnetics Laboratory, Institute of Physics, Polish Academy of Sciences)

SUBMITTED: 12Jul62

DATE ACQ: 05Jun63

ENCL: 00

SUB CODE: PH

NO REF SOV: 005

OTHER: 012

Card 2/2

CHMIELOWSKI, J.; MORKOWSKI, Janusz [translator]

"History of chemistry and chemical industry" by [mgr inż.] Eugeniusz Kwiatkowski; "Physical chemistry" by [doc. dr] Andrzej Gorski, and "Elements of solid state theory" by Gregory H. Wannier. Translated by Janusz Morkowski. Reviewed by J. Chmielowski. Hutnik P 30 no.1: 32-33 Ja '63.

MORKOWSKI, Janusz

Review of the theory of spontaneous magnetizing of thin
metallic films. *Zesz probl nauki Pol* 25:29-41 1963.

1. Department of Ferromagnetism, Institute of Physics,
Polish Academy of Sciences, *znau*.

MORKROVIN, V.

Hydraulic mining in ore mines. p. 27.

RUDY Vol. 4, no. 4, Apr. 1956

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

WORKSOY, G.I.

Prognostic charting of mean monthly values of H_{500} . Meteor. i gidrol.
no.10:9-13 0 '60. (MIRA 13:10)
(Weather forecasting)

JOHNS, A.

Characteristics of the grapes growing under the open sky in the protected
Garden in Lithuania. P. 101

Lietuvos TSR Mokslu akademija. Biologijos institutas. DARBAI. Vilnius
Volume 3, 1964
Lithuania, Poland

Monthly List of East European Accessions (E.E.A.) 10, Vol. 1, no. 1, Jan. 1964

Uncl.

MORKUNAS, A.M.; MUKHORINA, O.V.

[New studies and data of sewerage systems] *Novye issledovaniia i raschetnye dannye po kanalizatsionnym setiam. Leningrad. 197 1961. 71 p. (Leningrad. Inzhenerno-stroitel'nyi institut. Sbornik nauchnykh trudov, no.33).* (MIRA 16:3)

(Sewerage)

USHAKOV, V.A., kandidat tekhnicheskikh nauk; KARAGODIN, V.A. inzhener; MORO,
A.I., inzhener; KHAZANOV, B.E., inzhener; FEDOROV, B.S., inzhener; MA-
LITSKIY, S.I., inzhener.

Design and building of large size storm sewers. Gor.khoz. Mosk. 27 no.6:
26-30 Je '53. (MLRA 6:6)
(Moscow--Drainage)

MORO, Gabor

Remark about Zoltan Kabar's paper dealing with the destruction
of peat bogs. Agrohem talajtan 9 no.2:284 '60.

MORO, Mariya Ignat'evna; VIKULINA, E.K., red.; NOVOSELOV, V.V.,
tekhn. red.

[Independent work of students in elementary arithmetic
classes] Samostoiatel'naia rabota uchashchikhsia na urokakh
arifmetiki v nachal'nykh klassakh. Moskva, Izd-vo APN RSFSR,
1963. 158 p. (MIRA 16:10)
(Arithmetic--Study and teaching)

S/058/61/000/010/047/100
A001/A101

24,7900

AUTHORS: Al'tshuler, S.A., Leushin, A.M., Morocha, A.K.

TITLE: On the theory of spin-lattice interaction in ionic crystals containing Cr^{3+} and Ni^{2+}

PERIODICAL: Referativnyy zhurnal.Fizika, no.10, 1961, 164, abstract 10V362 (V sb. "Paramagnitn. rezonans", Kazan', Kazansk. un-t, 1960, 57-62)

TEXT: The authors calculate probabilities of relaxation transitions A between spin levels of Cr^{3+} and Ni^{2+} ions. Calculating formulae are derived for both the case of low temperatures, when spin-lattice interaction is brought about on account of direct processes, and for the case of high temperatures, when the processes of Raman scattering of phonons play the main role. Probabilities A are calculated by means of the operator of spin-lattice interaction which includes all normal coordinates of the octahedral complex, being linear in this operator; the part of this operator depending on normal coordinates in the quadratic way, has not been taken into account. ✓

V. Avvakumov

[Abstracter's note: Complete translation]

Card 1/1

AMINOV, L.K.; MOROCHA, A.K.

Theory of spin-spin interactions in crystals containing
rare earth ions. Fiz. tver. tela 3 no.8:2480-2481 Ag '61.
(MIRA 14:8)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-
Lenina i Kazanskiy filial AN SSSR.

(Nuclear spin)

(Rare earth metals)

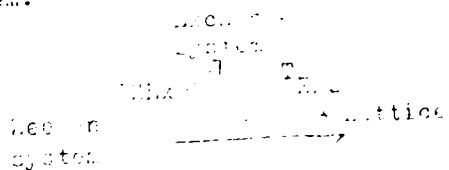
SPIN-LATTICE RELAXATION IN A SPIN-1/2
SYSTEM

Abstract

The spin-lattice relaxation in a spin-1/2 system is studied theoretically and is shown to occur through an exchange system.

INDEXED: J. Chem. Phys., vol. 4, no. 2, 196, 1966 - 1967

THAT: Spin-lattice relaxation is studied theoretically and is shown to occur through an exchange system:



The spin-lattice relaxation time from the eigenstates ψ_i of an arbitrary physical system ψ_i in a system which has the Hamiltonian $\hat{H} = \hat{H}_1 + \hat{H}_2 + \hat{H}'$ is given by

On the theory of spin-lattice ...

U/10/51/044, 0/10/2/045
b1 8/5106

ASSOCIATION: Kazanskiy filial AN USSR (Kazan' branch AS USSR)

SUBMITTED: February 1, 1962

Card 3/3

L33/3

S/056/62/043/005/034/058

B102/B104

AUTHOR: Morocha, A. K.

TITLE: Theory of symmetry in spin-phonon interaction

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 5(11), 1962, 1804 - 1812

TEXT: It is shown that the spin-phonon interaction Hamiltonian can be derived by making use of group-theoretical methods if the symmetry properties of the vibrations of the particles surrounding the paramagnetic ion, and those of the wave functions of the paramagnetic ion, are considered. χ_{ϕ} , the spin-phonon interaction operator is calculated from the variable part of the binding energy of the two-particle interaction function

$$V = \sum_{i,k} V_{ik}(r_{ik}; S_i S_k), \quad (1)$$

where $\vec{r}_{ik}$ is the particle distance and $\vec{S}_i, \vec{S}_k$ are the spin variables.

If one assumes that the interaction of the paramagnetic ion with the lattice is invariant with respect to the symmetry group of its position
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Theory of symmetry in...

3/056/62/043/003/034/038
3102/B104

and that binding with its nearest neighbors plays the main role in interaction,

$$H_{\text{eff}} = \frac{1}{2} \sum_k \left(\sum_{i,j} V_{ij,k}^1 Q_{i,k}^1 Q_{j,k}^1 + \sum_{i,j,l} W_{ijl,k}^2 Q_{i,k}^1 Q_{j,k}^1 Q_{l,k}^1 \right). \quad (2)$$

$V_{ij,k}^1 = \partial V_k / \partial Q_{i,k}^1$ и $W_{ijl,k}^2 = \partial^2 V_k / \partial Q_{i,k}^1 \partial Q_{j,k}^1 \partial Q_{l,k}^1$ are functions which depend only on the coordinates of the paramagnetic particles and its nearest neighbors; α is the number of the irreducible representation of G , j is the corresponding term in the α -th irreducible representation, x_{ik}^α is the coordinate system of the nearest neighbors:

$$Q_{i,k}^1 = \sum_{\alpha} B_{i\alpha}^1 x_{ik}^\alpha \quad (\alpha = x, y, z), \quad (3),$$

where

$$x_{ik}^\alpha = \left(\frac{2\hbar}{M} \right)^{1/2} \sum_p \omega_p^{-1} \Phi_{p\alpha}(a_p) \cos(\mathbf{k}_p \mathbf{r}_{ik} + \Delta_p). \quad (4).$$

Card 2/5

Theory of symmetry in...

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B102/B104

M is the mass of the crystal, ϕ_{pq} the unit vector of polarization of the p -th normal lattice vibration, a_p^+ and a_p are the production and annihilation operators (frequency ω_p , wave vector $\mathbf{k}_p$), Λ_p is an arbitrary phase.

With

$$A_{j,p}^{\alpha,k} = \left(\frac{2\hbar\omega_p}{Mv^2} \right)^{1/2} \sum_{i\alpha} B_{ij,\alpha}^{\alpha} \Phi_{p\alpha} \cos(\mathbf{k}_p \mathbf{r}_{i\alpha} + \Lambda_p), \quad P_p = a_p^+ + a_p$$

$$\mathcal{H}_p = \frac{1}{2} \sum_k \left(\sum_{i,j,l,p} V_{ij,l,p}^{\alpha,k} A_{i,p}^{\alpha,k} P_p + \sum_{i,j,l,p,q} W_{ij,l,p,q}^{\alpha,\beta,k} A_{i,p}^{\alpha,k} A_{j,q}^{\beta,k} P_p P_q + \dots \right). \quad (5)$$

is obtained. Assuming identical paramagnetic particles and neglecting boundary effects, the Koster theorem (Phys. Rev. 113, 445, 1959; 115, 6, 1959) can be applied to (5) and

$$\mathcal{H}_p^{\alpha} (m \rightarrow n) = \frac{i}{2} \sum_{k,p,r,s} q_{\alpha\beta}^{\gamma,s} \sum_{j=1}^n A_{j,p}^{\gamma,k} \psi_{j,k;mn}^{\beta,s,\alpha} + \text{quadratic term} \quad (6)$$

is obtained for the energy levels E_{α} (eigenfunctions ψ_{α}^{α}) and E_{β} (eigen-

Card 3/5

Theory of symmetry in...

5/056/62/043/005/034/058
B102/8104

functions ψ_i^β , with $\beta = \alpha\beta - \alpha_i$; $q_{\alpha\beta}$ ($s = 1, 2, \dots$) are constants, comprising all spin-phonon interaction mechanisms and the lattice field effects;

$Q_{j,k;mn}^{s,\alpha}$ are known matrices depending only on the properties of the representations α and β of G . If $\mathcal{K}_{\sigma\sigma'}^{\alpha\beta}$ is a matrix element of the operator of spin-phonon interaction due to $\sigma \rightarrow \sigma'$ in the magnetic field, $\mathcal{K}_{\sigma} = \sum_n R_{n\sigma} \mathcal{K}_{n\sigma}$; $\mathcal{K}_{\sigma}^* = \sum_n R_{n\sigma}^* \mathcal{K}_{n\sigma}^*$; $\mathcal{K}_{\sigma\sigma'}^{\alpha\beta} = \sum_{m,n} R_{m\sigma}^{\alpha\beta} \mathcal{K}_{mn}^{\alpha\beta} R_{n\sigma'}$. If, according to Koster, $\mathcal{K} = \mathcal{K}_0 + V$, where $\mathcal{K}_0$ includes all interactions that are independent of the applied field, and

$$V = \beta \sum_{\gamma} \sum_{k=1}^{n_{\gamma}} H_k^{\gamma} \left(\sum_i (L_i + 2S_i) \right)_k^{\gamma}, \quad (10),$$

$$V_{mn}^{\alpha\beta} = \beta \sum_{\gamma} \sum_{k=1}^{n_{\gamma}} H_k^{\gamma} \langle \Psi_m^{\alpha} | \left(\sum_i (L_i + 2S_i) \right)_k^{\gamma} | \Psi_n^{\beta} \rangle = \beta \sum_{\gamma, s} g_{\gamma\beta}^s \sum_{k=1}^{n_{\gamma}} H_k^{\gamma} U_{k;mn}^{\alpha\beta}. \quad (11),$$

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Theory of symmetry in...

S/056/62/043/005/034/058
B102/B104

the general field dependence of level splitting can be obtained from a diagonalization of (11). This method is now applied to the study of spin-phonon interaction effects in compounds of elements in the iron group.

With $E_a^0 - E_b^n = -|\Delta|$,

$$\mathcal{H}_{\text{eff}} = \mathcal{H}_0 - \frac{1}{\Delta} \sum_n (V_{0n}^{a\beta} \mathcal{H}_{n0}^{\beta a} + \text{K.C.}) + \frac{1}{\Delta^2} \sum_{nn'} V_{0n}^{a\beta} \mathcal{H}_{nn'}^{\beta\beta} V_{n'0}^{\beta a}. \quad (15)$$

is obtained. The F term (Cr^{3+} , V^{2+} , Ni^{2+}) and the D term (Cr^{2+} , Mn^{2+}) are studied in detail.

ASSOCIATION: Fiziko-tekhnicheskiy institut Kazanskogo filiala Akademii nauk USSR (Physicotechnical Institute of the Kazan' Branch of the Academy of Sciences USSR)

SUBMITTED: May 25, 1962

Card 5/5

14294-63 EWT(a)/EWT(1)/FCC(w)/HDS AFFTC/ASD IJP(0)
ACCESSION NR: AP3001268 8/0181/63/005/006/1528/1536
AUTHOR: Kessel', A. R.; Koroche, A. K.
TITLE: Equations of motion for effective spin. *71*
SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1528-1536 56
TOPIC TAGS: effective spin, rare earths, relaxation time, group theory, Bloch 55
function
ABSTRACT: The authors use group theory to introduce equations such as the Bloch function for effective spin. Previous works have employed a great number of equations, but the authors show that this number may be greatly reduced by employing the symmetry of the problem and by introducing effective spin. They illustrate the method with the rare earths, examining all cases of practical importance. They have found solutions to the equations and have obtained general expressions for relaxation time, including all possible mechanisms of interaction between ions and their environment. They show that after two impulses there occurs a separation, with time, of signal echoes from magnetic dipole induction and electrical quadrupole induction. There is possibly also a separation according to frequency. Orig. art. has 15 formulas.
Card 1/2 Association: Physical and Technical Inst., Kazan branch, Academy of Sciences, SSSR

L 17636-63 EWT(1)/BDS/ES(w)-2 AFFTC/ASD/ S/056/63/044/003/046/053
 ESD-3/IJF(C)/SSD Pab-4 64

AUTHOR: Kessel', A. R. and Morozha, A. K.

TITLE: The effect of the electric quadrupole induction during the electron resonance

PERIODICAL: Zhurnal eksperimental'noy i tekhnicheskoy fiziki, v. 44, no 3, 1963, 1113-1115

TEXT: Whenever the resonant magnetic field causes transitions between levels where magnetism is not entirely due to spin, the motion of the orbital magnetic moment is accompanied by changes in the distribution of the electron charge. In particular, the motion of the electrical quadrupole moment of the electron shell induces a magnetic field which can be measured (A. R. Kessel', Ref. 1: FTT, 5, 1055, 1963). In this letter the authors investigate the various possible signals and present formulas giving their respective amplitudes. There is 1 figure and 1 table.

ASSOCIATION: Fiziko-tekhnicheskii institut Kazanskogo filiala Akademii nauk SSSR
 (Physico-Technical Institute of the Kazan' Section of the AS USSR)

SUBMITTED: December 12, 1962
 Card 1/1

VESELOVSKAYA, I.Ye.; FLISSKIY, M.M.; DZHAGATSPANYAN, R.V.; MOROCHKO, L.V.

Study of the adsorption of sulfate ion on a graphite anode
under conditions of chloride electrolysis. Zhur. prikl.
khim. 36 no.10:2179-2183 0 '63. (MIRA 17:1)